

WHAT IS CLAIMED IS:

1. An inspection apparatus for inspecting a target object on the basis of a content of a fluorescent component included in the target object, the inspection apparatus comprising:

conveying means for conveying the target object along a conveyance path;

a light-emitting device for emitting light toward the target object conveyed by the conveying means;

a light-receiving device for receiving fluorescence emitted from the target object as irradiated with the light; and

a fluorescent member disposed on the conveyance path and adapted to generate fluorescence against the light emitted from the light-emitting device.

2. The inspection apparatus according to claim 1, further comprising controlling means for, before the target object conveyed by the conveying means arrives at an inspection area of the conveyance path, receiving an output signal from the light-receiving device to detect a quantity of the fluorescence generated from the fluorescent member, and for controlling a quantity of the light from the light-emitting device on the basis of the quantity of the fluorescence generated from the fluorescent member.

3. The inspection apparatus according to claim

1, wherein the fluorescent member is a fluorescence glass.

4. The inspection apparatus according to claim 2, wherein the fluorescent member is a fluorescence glass.

5. The inspection apparatus according to claim 1, further comprising:

a light-detecting portion for outputting a signal depending on a fluorescence amount received by the light-receiving device;

light source control means to control a light emitting amount from the light-emitting device for changing in analog manner to pre-determined quantity selected by the control means for controlling the quantity of the light;

arithmetic means for calculating the changing fluorescence quantity; and

decision means for deciding a type of the target object on the basis of the changing quantity of fluorescence.

6. The inspection apparatus according to claim 5, the arithmetic means calculating the changing quantity of fluorescence from the changing amount of the illumination from the light-emitting device by second order differentiating output data from the right-receiving portion.

7. The inspection apparatus according to claim 5, the decision means deciding a type of the target object on the basis of a comparison between pre-determined quantity and changing quantity of the fluorescent.

8. An inspection method for inspecting a target object on the basis of a content of a fluorescent component included in the target object, the inspection method comprising steps of:

10        detecting a start signal;  
          calibrating a light amount from a light-emitting device;

          deciding a type of the target object on the basis of a fluorescent quantity from the target object illuminated by the light-emitting device; and

15        continuing the step of deciding a type of the target object until a stop signal is detected.

9. The inspection method according to claim 8, the step of calibrating the light amount from the light-emitting device having steps of:

20        outputting an initial control signal to the light-emitting device;

          detecting a fluorescent quantity from a light-receiving device while a illuminating member is illuminated by the light-emitting device;

25        deciding an illumination quantity for the light-

emitting device by comparing between a pre-determined fluorescent quantity and the detected fluorescent quantity to the difference between these values becoming equals to zero; and

5           outputting the illumination quantity as a corrected control signal.

10.   The inspection method according to claim 8, the step of deciding a type of the target object having steps of:

10           changing the control signal based on the corrected signal in analog rule;

          calculating a second order differential of changing output from the right-receiving device; and

15           determining a type of the target object by comparing the second order value and a pre-determined threshold value.